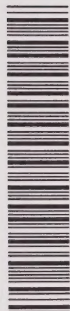


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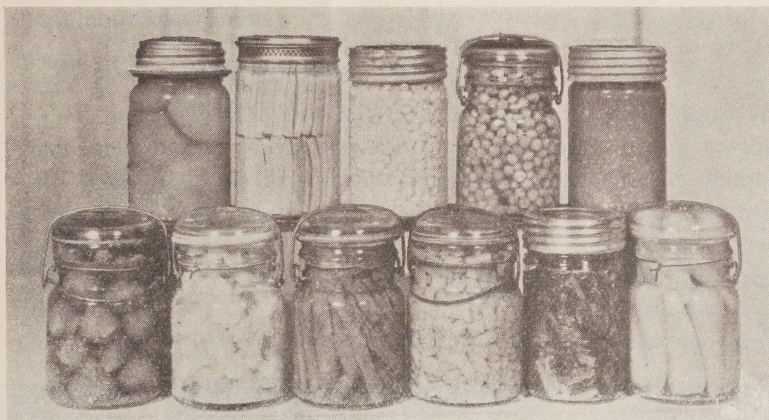
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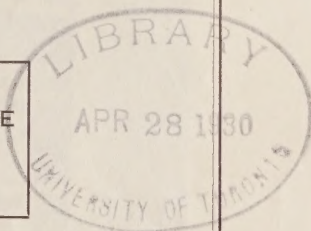
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CANNING FRUITS AND VEGETABLES

BY
EDITH ELLIOT

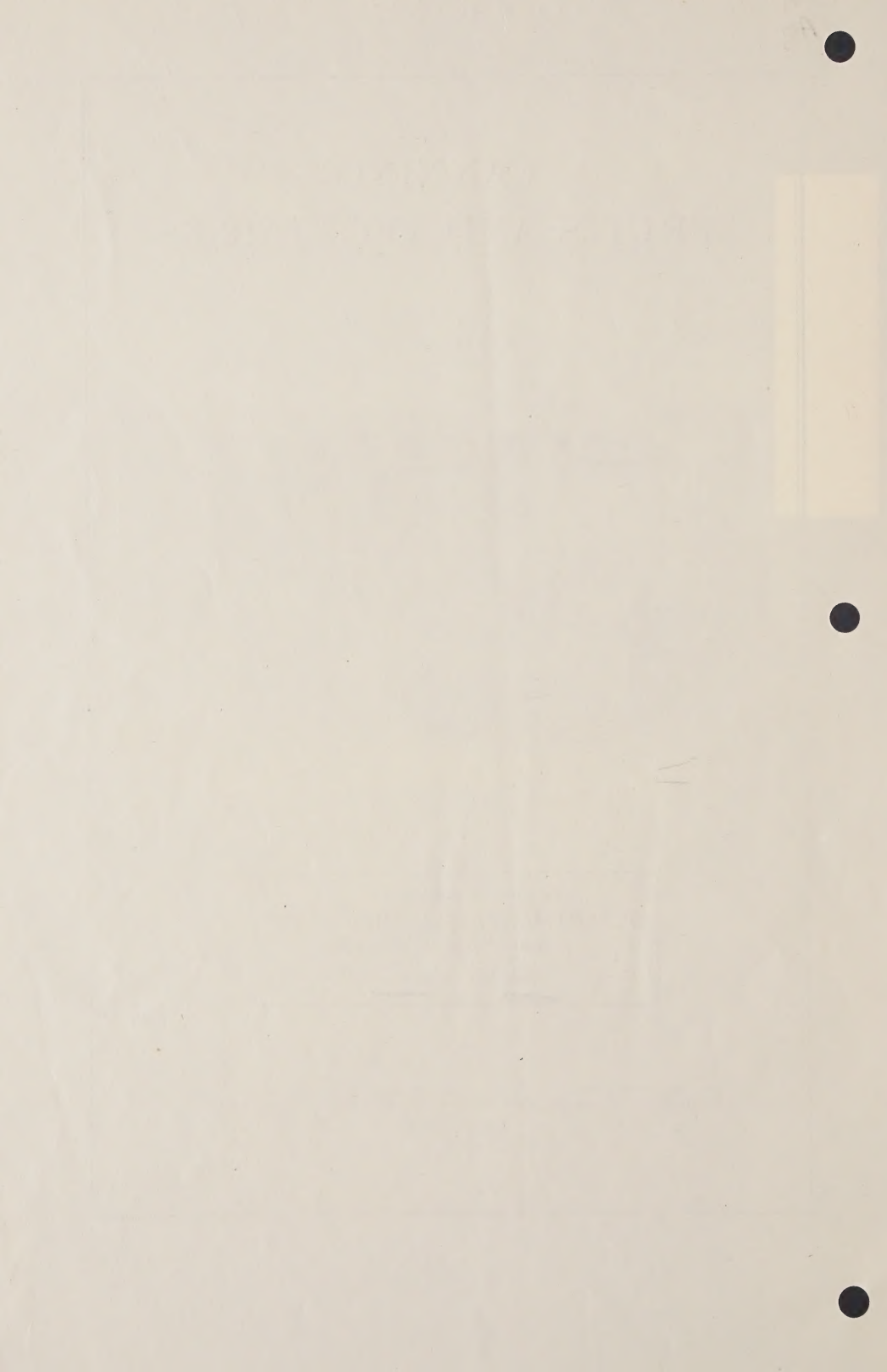


[FRUIT BRANCH]
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Canning Fruits and Vegetables

OUR present day knowledge of nutrition, and particularly of the value of minerals, vitamins and roughage in our daily diet, leads us to give Fruits and Vegetables their true place in the menu. At certain seasons of the year, our Canadian Fruits and Vegetables are unobtainable in their fresh state so we must rely on canned foods. There is nothing more satisfying to a housewife than a pantry shelf well stocked with home-canned Fruit and Vegetables.

HOW CANNING PRESERVES FOOD

If food products are left in their natural state, most of them spoil in a few days—some in a few hours, owing to the growth on their surface or in their tissues of bacteria, mould or yeasts. If such organisms can be destroyed and the entrance of other organisms prevented, the food can be kept in good condition indefinitely. Sufficient heat for a sufficient length of time will destroy any form of life. Therefore successful canning depends on destroying all microscopic life and using air-tight



containers which protect from reinfection. Our aim in canning fruit and vegetables is to assure this result while preserving natural shape, colour and fresh flavour. Safe canning depends on strict attention to every step in the process. Can *Fresh Vegetables and Fruit*. The fresher they are the better will be the finished product, and the smaller the chance of failure. For best results can Fruits and Vegetables the day they are gathered.

EQUIPMENT

No equipment is needed other than that found in the ordinary kitchen. Sharp knives—preferably stainless steel, a colander, bowls, measuring cups, enamel pie plates, wooden spoons, a wide mouthed funnel for filling jars, and a jar lifter to save burned fingers in lifting jars from the sterilizer. The sterilizer may be the common wash boiler, the steam pressure cooker, or the oven.



Simple equipment for home canning.

1. HOT WATER BATH CANNER.

A hot water bath outfit may be any container of sufficient depth to allow the jars to be covered with water while standing on a false bottom which allows circulation of water under the jars. It must also have a tight fitting cover. Special kettles may be bought for the purpose having a wire rack with handles for lifting in and out of the boiling water, but the wash boiler or other deep pot may be fitted with a wooden rack and will answer the purpose nicely.

2. STEAM PRESSURE COOKER.

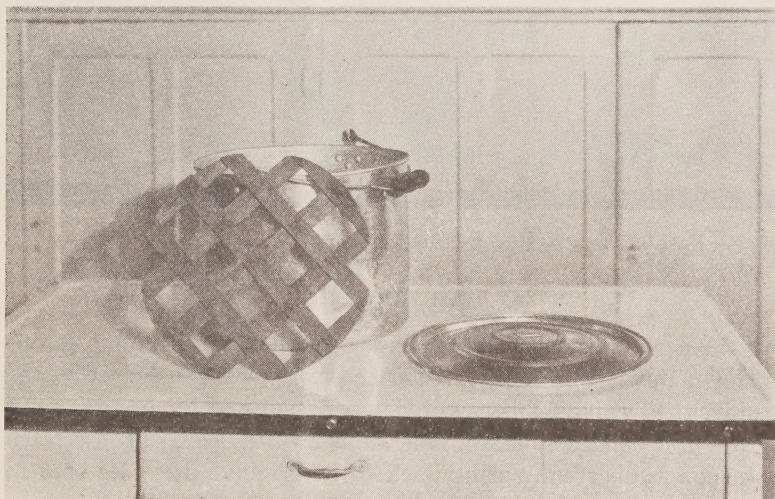
This consists of a heavy container equipped with tight cover fastened in place with bolts, and with a pressure gauge, pet cock and safety valve. Because of the pressure a higher temperature may be reached and the time of sterilization shortened.

3. OVEN.

This method may be used for small fruits and tomatoes. An oven with thermostat control is very satisfactory.

4. STEAM COOKER.

The steam is generated below and circulates around the jars, giving an even temperature. The time of sterilization is longer with this type of canner.



Simple type home sterilizer.

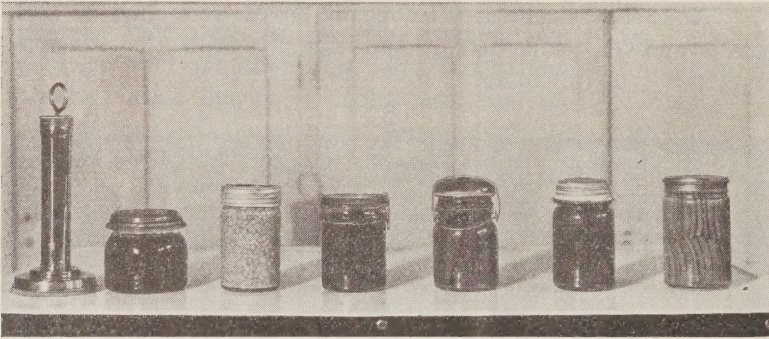
5. OPEN KETTLE.

While this method of cooking fruit with sugar in an open kettle is a common one it is not recommended for canning fruits and should never be used for vegetables. Jams and marmalades are done in the open kettle.

In canning fruits by the open kettle method wash them carefully and cook in sugar syrup until tender. Pack while boiling hot into clean hot sterilized jars, partially seal and process for five minutes. Then seal.

JARS

A jar for use in canning should have a smooth rim and good fitting cover, to furnish a perfect seal. Test each jar before you use it. See that it is not cracked. See that there are no chips in the rim of jar or cover. Fill the jars with water, adjust the rubber, seal and invert to test for leakage. Be sure that the wire spring of a spring top jar springs into position with a snap. New metal rings should replace those which have become cracked or corroded.



Types of jars.

JAR RUBBERS

Jar rubbers are a very important part of canning equipment. Buy fresh rubbers each season. Never use last years' rubbers. Twelve rubbers are cheaper than one jar of fruit. To test—first bend double,—an old rubber will crack. Then stretch—a new rubber will spring back to its original size. Be sure to have the type of rubber which suits the type of jar you are using. Wide rubbers fit spring top jars. Narrow rubbers fit screw tops.

PROCESSES

COLD PACK METHOD.—By this method the food is packed into sterilized jars while raw and cold, covered with hot liquid and partially sealed—then sterilized.

HOT PACK METHOD.—By this method the food is subjected to a short precooking and packed hot—thus requiring shorter time for heat penetration and in some cases allowing more vegetable to be packed in the jar. With vegetables such as corn

or greens the centre of the filled jar reaches sterilization temperature from thirty to fifty minutes sooner than when packed cold.

GRADING OR SORTING

Uniformity of size and maturity makes a more attractive product. It is well to spend the extra time.

WASHING

All Fruit and Vegetables should be thoroughly washed until all soil is removed. Lift them from the water instead of draining it off. A small brush is useful for cleaning Vegetables.

TO PREVENT DISCOLORATION

Such fruits as peaches, pears and apples should be dropped in a brine of 1 teaspoon of salt to 1 quart cold water as soon as peeled, to prevent discoloration.

PRE-COOKING OR BLANCHING

This process consists of heating in steam or boiling water before packing. The purpose is:

1. To remove particles of sand or dirt.
2. To loosen skins.
3. To shrink greens, thus allowing closer pack.
4. To preserve colour.
5. To allow products to be packed hot.

A wire basket, large strainer or a square of cheese cloth may be used. The time varies—see table. Peaches, tomatoes, beets, carrots should be dipped in cold water after blanching but never let them stand in it more than a few seconds.

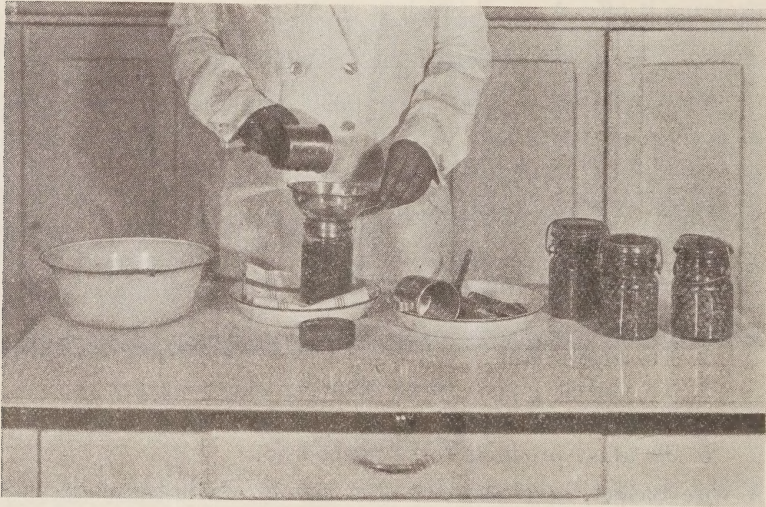
STERILIZE JARS

This may be done while the Fruits or Vegetables are being prepared. Wash in soapy water, rinse, half fill each jar with water and stand on the rack in the boiler. Surround with cold water, bring to boiling point, boil fifteen minutes. Keep them boiling hot until ready to fill. Never touch the inside of a sterilized jar with an unsterile object.

FILLING JARS

When packing work as quickly as possible. Corn, beans and spinach should be packed fairly loosely to allow perfect pene-

tration of heat to the centre of the jar and thus insure even sterilization. Pack the jar full, then fill with boiling liquid. After filling dip the blade of a knife in boiling water and run it down and around the inside of the jar to remove air bubbles. Adjust rubbers, which have been dipped in boiling water, and tops. Then partially seal. With wire clamp jars adjust the top clamp but do not spring down the lower one. With screw top jars screw tight—then unscrew half turn. On vacuum jars adjust metal clamps.



After pre-cooking Vegetables should be packed in scalded jars, using vegetable liquor for filling

SYRUP FOR FRUITS

Thin syrup 1 C. sugar to 2 cups water.

Medium syrup 1 C. sugar to 1 cup water.

Heavy syrup 1 C. sugar to $\frac{1}{2}$ cup water.

Stir together and boil 5 minutes. For pint jars of large fruit allow about 1 cup of syrup. For pint jars of small fruit about $\frac{1}{2}$ cup.

CANNING FRUIT WITHOUT SUGAR

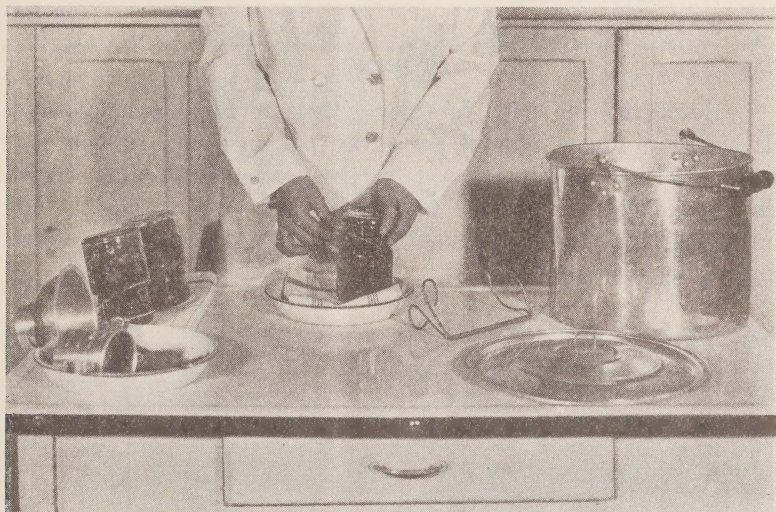
All fruits may be successfully canned without sugar. Use boiling water instead of syrup. Add 5 minutes to time of sterilization given in the time table.

BRINE FOR VEGETABLES

Allow $\frac{1}{2}$ tsp. salt to each pint jar and fill to over-flowing with boiling water.

PROCESSING OR STERILIZING

I. **WATER BATH.**—Fill water over the jars 2 inches. Have water near the temperature of the filled jars. Count time of sterilization from the time the water boils. Keep water boiling—as soon as time is up remove the jars and seal at once and invert.



Seal jars immediately after removing from the sterilizer. Invert to cool.

II. **STEAM PRESSURE COOKER.**—Be sure that sufficient water is added. Allow steam to escape from the open pet cock at least 3 min. then close and allow pressure to rise until gauge registers required pressure. Count time of sterilization from this time. When sterilized sufficiently—cook until gauge registers zero then open pet cock **SLOWLY**. When jars are removed seal at once and invert.

OVEN.—Place jars 2 inches apart on a tray in heated oven.

STEAM COOKER.—Place jars on the rack in the cooker. Be sure to add plenty of water. Be sure that water is boiling and steam rising before placing jars—count time of sterilization

from 3 minutes after putting cover on cooker. This method requires longer sterilization period. Remove jars—seal and invert.

NEVER OPEN A JAR AFTER STERILIZING.—Sometimes the contents of a jar will shrink in processing leaving space at the top of the jar. This is due to air spaces left in packing the jars, but the entire contents is sterile and will keep perfectly. Opening may allow bacteria to enter and contaminate the product.

WHY FRUITS FLOAT IN THE JAR

1. Overprocessing.
2. Too heavy syrup.

STORING

Before storing wipe jars dry. Be sure there are no leaks. If a leak is found, remove the cover, put on a new rubber seal and resterilize $\frac{1}{2}$ time allowed for the particular product. Store in a cool, dry, dark place or wrap each jar in paper. The cartons in which new jars are packed make a very satisfactory storage place for filled jars.



Finished product ready to store.

TIME TABLE FOR FRUITS

| Product | Preparation | Sterilization | | | |
|------------------------------|---|-----------------------|-----------------------|-------------|--------------|
| | | Hot water bath 212° F | Steam pressure 5 lbs. | Oven | Steam cooker |
| | | Minutes 30 | Minutes 10 | Minutes 50 | Minutes 35 |
| Apples, sliced or quartered. | Pack in jars—cover with thin syrup. | | | | |
| Applesauce..... | Pack hot..... | 12 | 5 | | 15 |
| Apricots..... | Peel—halve and pit—pack—cover with boiling thin syrup. | 20 | 10 | 55 at 275°F | 30 |
| Blackberries or Blueberries. | Wash—pack, fill with boiling medium syrup. | 20 | 10 | 35 at 275°F | 30 |
| Cherries..... | Wash—stem—pit and pack—cover with boiling medium syrup. | 20 | 10 | 35 at 275°F | 30 |
| Currants..... | Wash—stem—pack, fill with boiling heavy syrup. | 20 | 10 | 35 at 275°F | 30 |
| Fruit Juices..... | Crush fruit—heat slowly—strain—pour into jars. | 30 | 10 | 50 at 250°F | 50 |
| Gooseberries..... | Wash—pack in jars—fill with boiling heavy syrup. | 16 | 10 | 30 at 275°F | 25 |
| Peaches..... | Immerse in boiling water 3 min.—cold dip—peel—remove pit—pack in jars—add boiling medium syrup. | 20 | 10 | 35 at 275°F | 30 |
| Pears..... | Pare—halve—remove core—pack—fill jars with boiling thin syrup. If pears are firm, steam 15 min. before packing. | 20 | 10 | 35 at 275°F | 30 |
| Pineapple..... | Cut in uniform pieces—pack in sterile jars—fill with medium syrup. | 30 | 15 | 35 at 275°F | 35 |
| Plums..... | Wash—prick skin—pack cold—cover with boiling medium syrup. | 20 | 10 | 45 at 275°F | 30 |
| Raspberries..... | Wash if necessary—pack in jars—cover with boiling medium syrup. | 16 | 10 | 30 at 275°F | 25 |
| Rhubarb..... | Wash—Cut in small pieces—blanch 1 min.—cold dip—pack. Cover with boiling medium syrup. | 16 | 10 | 20 at 250°F | 25 |
| Strawberries..... | Wash—steam—fill jars—cover with boiling medium syrup. | 16 | 10 | 35 at 275°F | 25 |

For larger jars increase time of sterilization 5 minutes.

Raspberries, strawberries, or rhubarb may be canned successfully by what is known as the raw canning method. Pack in jars. Cover with boiling medium syrup, place on newspaper in a tub and pour in enough boiling water to cover the jar 3 inches over the top. Place a blanket or rug over the tub and leave until cold. In pouring in boiling water care should be taken not to pour directly on the jars.

TIME TABLE FOR VEGETABLES

| Product | Preparation | Time of sterilization | |
|-----------------------------|---|--------------------------|-------------------------------|
| | | Hot water bath 212° F | Steam pressure, 10-15 lbs. |
| Asparagus..... | Wash—tie in uniform bundles—stand upright in 2 inches of water. Boil 4 min. Pack hot—add $\frac{1}{2}$ tsp. salt to each pint jar—fill with boiling water. | min. 120 | min. 40 |
| Beans, string or wax. | Wash—string—cut in desired lengths. Cover with water, bring to the boiling point—boil 4 min. Pack hot—add $\frac{1}{2}$ tsp. salt to each pint jar—fill with boiling water. | 180 | 40 |
| Beets..... | Wash and cut off tops 2 inches above beet. Boil 15 min. Cold dip—remove skins—pack—add $\frac{1}{2}$ tsp. salt to a pint jar—fill with boiling water. | 90 | 40 |
| Carrots..... | Use only very young carrots. Wash and boil 5 min. Cold dip—slip off skins—pack—add $\frac{1}{2}$ tsp. salt to a pint jar—fill with boiling water. | 120 | 40 |
| Cauliflower..... | Wash—separate the flower. Drop into salty water. Let stand $\frac{1}{2}$ hour—cover with water—bring to boiling—drain—pack jars—add $\frac{1}{2}$ tsp. salt to a pint jar—fill with boiling water. | 60 | 30 |
| Corn..... | Cut corn from cobs. Cover with boiling water and bring to boiling point—fill jars, covering corn with boiling liquid—add $\frac{1}{2}$ tsp. salt to a pint jar. | 180 | 60 |
| Chard or Spinach.... | Wash carefully—steam 5 min.—pack in jars—add $\frac{1}{2}$ tsp. salt to a pint jar—fill with boiling water. | 180 | 60 |
| Peas..... | Use only young tender peas. Shell and wash—cover with water and bring to a boil—pack—add $\frac{1}{2}$ tsp. salt to a pint jar—fill with boiling water. Intermittent sterilization is recommended for peas. 60 min. on each of 3 successive days if water bath is used. | 180 | 60 |
| Sweet green or red peppers. | Wash—remove seeds—boil 3 min.—cold dip—remove skins—pack—allow 1 tsp. salt to a pint jar—cover with boiling water. | 45 | 30 |
| Pumpkin..... | Cut in pieces, remove seeds and membrane—peel—steam until tender—mash pack. | 180 | 60 |
| Tomatoes..... | Scald and peel—pack in jars—cover with tomato juice—allow $\frac{1}{2}$ tsp. salt to a pint jar. | 22 | 15 |

It is not desirable to can Vegetables in jars larger than 1 pint as the time taken for penetration of heat prolongs the time of sterilization and affects vitamins.

SCORE FOR CANNED PRODUCTS

| | |
|---|-----|
| Appearance.. | 45 |
| Colour—(Intensity and evenness).. | 15 |
| Pack—Uniformity and fullness.. | 15 |
| Liquid—Proportion and clearness.. | 15 |
| Texture.. | 20 |
| Flavour.. | 35 |
| <hr/> | |
| Total.. | 100 |

THE SALE OF HOME CANNED PRODUCTS

If home canned products are to be sold, certain legal restrictions must be observed. Information may be obtained by writing the Fruit Branch for a copy of the regulations pertaining to Canned Fruit and Vegetables.

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1930



